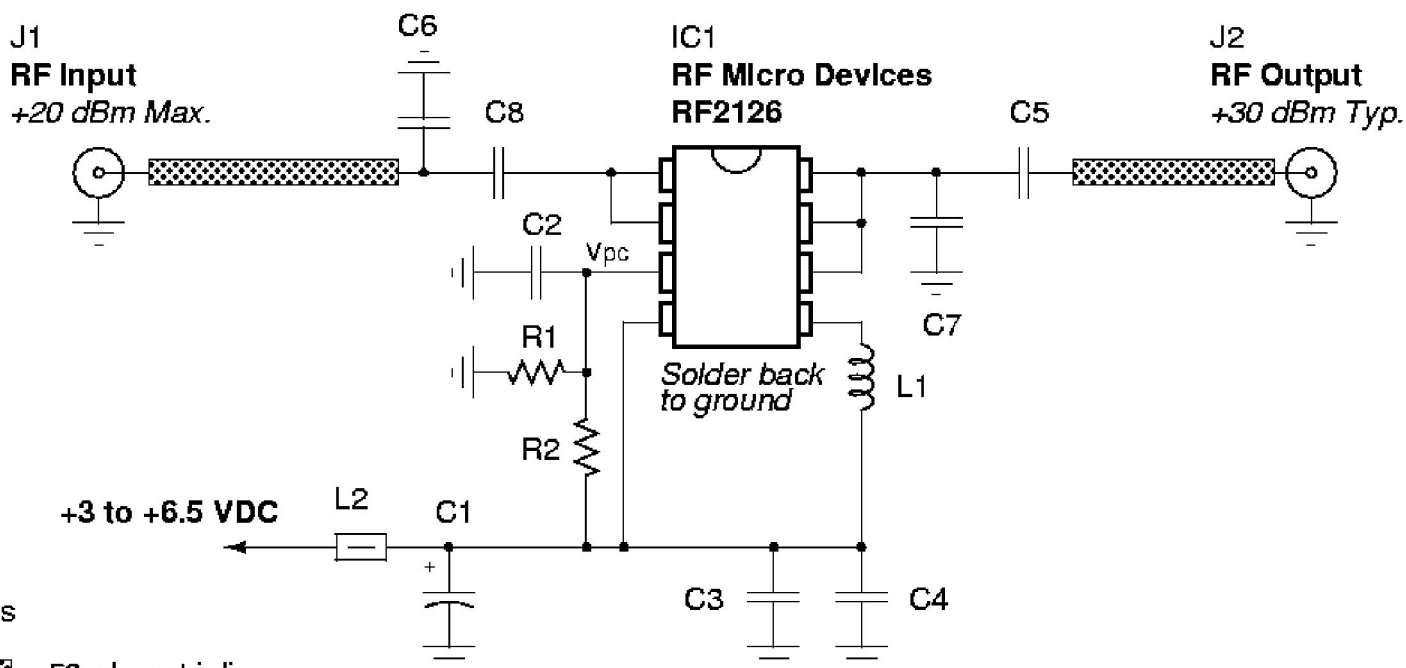




One Watt 2.45 GHz Linear Amplifier

Click image for PostScript version.



Notes

-  50-ohm stripline
-  Type 43 ferrite bead

www.gbppr.org
[Reversed PCB pattern](#) (6k PostScript)

Capacitors

Schematic Reference	Value	Description	Package	Supplier	Supplier Part Number
C1	1 μ F	electrolytic, 10%, 16V	SMT or leaded	Digi-Key	P2105-ND
C2, C3	1000 pF	ceramic, X7R, 50V	0603 SMT	Digi-Key	PCC1772CT-ND
C4 <small>Note 1</small>	22 pF	Johanson ceramic 5%, 100V	0504 SMT	Newark	48F4909
C5 <small>Note 1</small>	3.3 pF	ceramic, +/- 0.25 pF, 50V NP0	0402 SMT	Digi-Key	311-1008-1-ND
C6 <small>Note 1</small>	2 pF	ceramic, +/- 0.25 pF, 50V NP0	0402 SMT	Digi-Key	311-1006-1-ND
C7 <small>Note 1</small>	1.8 pF	ceramic, +/- 0.25 pF, 50V NP0	0402 SMT	Digi-Key	311-1004-1-ND
C8 <small>Note 1</small>	1.6 pF	ceramic, +/- 0.25 pF, 50V NP0	0402 SMT	Digi-Key	311-1003-1-ND (1.5 pF)

Inductors

Schematic Reference	Value	Description	Package	Supplier	Supplier Part Number
L1	4.7 nH	2%	0603 SMT	Digi-Key	PCD1290CT-ND
L2	31 ohm @ 100 MHz	ferrite bead, IDC 500 mA	1206 SMT	Digi-Key	240-1028-1-ND

Resistors

Schematic Reference	Value	Description	Package	Supplier	Supplier Part Number
R1	2200 ohm	film, 5%	0603 SMT	Mouser	301-2.2k
R2	1000 ohm	film, 5%	0603 SMT	Mouser	301-1k

Integrated Circuits / Transistors

Integrated Circuits / Transistors

Schematic Reference	Value	Description	Package	Supplier	Supplier Part Number
ICI	RF2126	RF Micro Devices 1 Watt 2.4 GHz power amplifier	SOP-8	Cracker Jack Box	

Other

Schematic Reference	Value	Description	Package	Supplier	Supplier Part Number
	6 x 6 inch	1/32 inch double sided, 1 oz, FR-4 dielectric copper clad board		Digi-Key	PC45-S-ND
J1, J2		PCB mount SMA jacks		Mouser	530-142-0701-801
		0.020 inch silver solder		Radio Shack	64-013

Notes

Part numbers are for reference only. Alternate components may be substituted.

[1] You can also use porcelain SMT capacitors which are available from [American Technical Ceramics](#) or [Down East Microwave](#).

It's also possible to run the RF2126 at around 6.5 volts for slightly more power output. You could try a 7805 voltage regulator with two silicon diodes (or a red LED) in series with the ground lead (cathode to ground). Be sure to isolate the ground tab on the 7805 though or it won't work. You can even just use a plain old 7806 voltage regulator for 6 volts output.

Suppliers

- [Mouser](#)
- [Digi-Key](#)
- [Richardson Electronics](#)
- [Allied Electronics](#)
- [Newark Electronics](#)
- [Arrow Electronics](#)
- [Radio Shack](#)
- [Coilcraft](#) Free sample inductors
- [RF Micro Devices](#)